

existence is represented in the accompanying figure (Plate I.), copied from a drawing of a living bird made by myself last summer. But the whole body soon becomes covered with a snow-white garment, over which the true plumage gradually extends, and in the course of between two and three months it is able to fly. For a considerable time after this period, however, small detached masses of down may be seen protruding through the feathers, more especially those of the head and neck. The plumage from this stage on to maturity is so well known that I need not occupy more valuable space in the description of it, and I therefore bring these remarks to a close.

II.—Notes on the Birds of Southern Texas.

By H. E. DRESSER.

[Concluded from 'The Ibis' for 1865, page 495.] ✓

COLUMBA FLAVIROSTRIS, Wagler. Red-billed Dove.

Common near Matamoras, breeding there. During the autumn, quantities of these birds, the two next species, and *Ortallida macalli* are brought to the market for sale. One I picked out of such a lot, on the 9th August, 1864, agrees with McCall's description of *Columba solitaria*, excepting that the neck and breast have reddish, instead of bluish metallic reflexions. I examined many at the market, but could find none differing from my specimen, except in size, and none answering more nearly to that description. At Brownsville this bird is not uncommon, but is found only a short distance towards the interior of Texas, and I noticed none higher up the Rio Grande than Roma.

A Mexican who shot Doves for the market told me that he had found this species breeding near the town of Matamoras, and that it builds a nest somewhat similar to that of *Zenaidura carolinensis*, and lays two eggs somewhat larger than those of that bird.

Bill coral-red at base and for rather more than two-thirds of its length, the tip being whitish; iris bright orange; the bare space round the eye and legs coral-red. Stomach containing a sort of blueberry. Length 13 inches; expanse of wings 23 inches.

MELOPELIA LEUCOPTERA (Linnæus). White-winged Dove.

Very common near Matamoras, Brownsville, and as far in Texas as the Sal Colorado, after which it becomes rare, and I never saw one further north or east than the Rio Nueces. It is not uncommon at Eagle Pass, where I saw many in cages at the huts of the Mexicans.

Male. Bill purplish-black; iris bright orange; the bare space round the eye bright powder-blue; legs coral-red, with a tinge of lake. Stomach containing maize and caterpillars.

ZENAIIDURA CAROLINENSIS (Linnæus). Carolina Dove.

Common and resident in every part of Mexico and Texas that I visited. I found many nests of this bird near San Antonio in June, all very slightly built of sticks, placed on the branch of a mezquite tree or bush, and containing two pure white eggs. I have, however, in two instances seen nests on the ground. I have also found this bird breeding very late in the year; indeed I saw a nest containing two fresh eggs, in a mezquite tree near Barton's Rancho, between San Antonio and Brownsville, on the 7th of September, 1863.

CHAMÆPELIA PASSERINA (Linnæus). Ground-Dove.

During my stay at Matamoras I found this bird rather common, and generally noticed them on the road between Matamoras and Brownsville, as well as on a sand-plain close to Fort Brown, on the Texan side of the river. In the interior of Texas I never observed any, except in April 1864, when I saw one close to the Medina River, near San Antonio.

Male (shot 11th July, 1863). Beak purplish-black; iris bright red; legs flesh-coloured. Stomach containing small seeds.

ORTALIDA MACCALLI, Baird. Chiacalacca.

This bird is very common near Matamoras and Brownsville; and in the autumn great numbers are exposed in the market for sale at the former place. The Mexicans hold the Chiacalacca in high esteem for its fighting-qualities, and often keep it in a domesticated state, and, crossing it, it is said, with the common fowl, use the mule birds for cock-fighting; indeed by many they are considered far superior to the pure-bred game-cocks*.

* This statement I am aware will scarcely be received without hesita-

I have seen one fight at the Matamoras cockpit ; and it certainly showed as much pluck as the ordinary cocks, and, at the same time, was far more sprightly and quick in its movements. I was unable to procure a specimen of the hybrid ; in fact I only saw it on one occasion, in the public cockpit.

I kept a tame Chiacalacca at Matamoras ; but, like my Paisano, he got too familiar, for I could not keep him out of the room. He would often go away for a day and pay a visit to the poultry belonging to a neighbour ; and I once lost him for four days, eventually finding him in the possession of some Mexicans, who refused to give him up ; but I took him forcibly away from the man who held him, and, finding that I intended to have my own way, they let me go off with him unmolested. He was eventually lost during my absence, in the confusion when Cortinas took Matamoras—which was vexing, as I intended to have sent him to England by some steamer going direct to Liverpool. On my return to Matamoras—late in July 1864, it was too late to obtain the eggs of this bird, as early in August I saw young birds exposed in the market for sale.

The habits of my bird were very similar to those of the common Fowl ; and whenever I missed him I had only to go to a poultry-yard near our house, and generally found him there.

MELEAGRIS GALLOPAVO, Linnæus. Wild Turkey.

Common in all parts of Texas and Mexico that I visited, particu-

tion, but I must say that I have a good deal of faith in the information I got. Not merely one or two, but many Mexicans, on whose word I think I can place some reliance, assured me of the truth of what I have above said. I made many inquiries respecting these hybrids, and was told that the cross is always between the male *Ortalida* and the female of the Common Fowl. The only example I saw seemed a bird very likely to have had such an origin. *O. macalli* in its habits bears a much closer resemblance to our domestic poultry than its appearance would at first lead one to suppose. I blame myself very much for not having got at the bottom of this interesting question ; but during my short stay at Matamoras I was so very much engaged with business, that I put off doing so to a future opportunity ; and when I returned thither it was only *en route* homeward. My own tame bird, mentioned in the text, consorted frequently with the poultry, and though young I have seen him making amorous advances to the hens.

larly so on the rivers between San Antonio and the Rio Grande. My first Turkey-hunt was on the Upper Medina river, about forty miles from San Antonio; and I was fortunate enough to kill a couple of gobblers with the first two shots I fired, which was more than I expected, as I must confess that on first seeing them I felt a sensation something akin to what the Americans call "buck-ague." Since that I have killed many Turkeys in Texas, both for sport and the pot. The most I ever killed in one day was nine, all of which I shot from the roost one evening.

They are very wary and difficult to approach during the day-time; but by watching to see where they roost, and paying them a visit there by moonlight, one can be pretty sure of bagging one or two. They generally prefer roosting in high cotton-wood trees on the banks of a stream, and perch as high up as possible. I once counted eleven on one large bough of a cotton-wood tree on the Medina. When the pecan-nuts are ripe, the Turkeys become very fat, as they are extremely fond of these nuts, which are oily. I shot an unusually fat bird in November 1863; and taking it to San Antonio to have it weighed, I found it, without its entrails (for I had drawn them in order to keep it as fresh as possible), to weigh nearly sixteen pounds.

I never succeeded in finding a Turkey's nest, but was told by hunters who had done so that the birds scratch a hole in the ground, or make a sort of nest in the grass under a bush, and that the eggs resemble those of the tame Turkey, but are rather smaller and more elongated in form. The Mexicans on the Upper Rio Grande sometimes have the Wild Turkey domesticated; and at Piedras Negras I saw two which had been caught when quite young and had become very tame. The female was then sitting, and I had an opportunity of examining the eggs, which I found to agree with the description of those found by the hunters.

CUPIDONIA CUPIDO (Linnæus). Pinnated Grouse, or Prairie-chicken.

In travelling from Brownsville to Victoria, after leaving the chapparral and entering the prairie-country, I found this bird very common; and throughout the whole of the prairie-country of Texas it was abundant.

ORTYX TEXANUS, Lawrence. Texan Quail.

This, the so-called "Common Partridge" of the country, I found abundant everywhere in localities suitable to its habits. Near Matamoras it is common, and is the only species of Quail I shot or noticed there. Near Roma, Rio Grande City, and Laredo I saw none, but found the Blue Quail abundant. At Eagle Pass and Piedras Negras, where the soil is sandy, the grass scanty, and cacti are abundant, I only found one bevy of Texan Quail, but saw plenty of Blue Quail. Near San Antonio only the Texan Quail is found; nor did I observe any other species in travelling towards the north-east. Amongst the Bandera Hills, where I found the Massena Quail, I also found the Texan Quail in the valleys and near the maize-fields. In travelling from Brownsville to San Antonio the Texan Quail was abundant, except in the sand deserts.

The present species does not seem to be very particular as to its breeding-season, as I found young birds near Matamoras early in July, and in September also quite young birds near the Nueces River; and Dr. Heermann tells me that he has procured eggs at San Antonio late in the same month. I have one nest of eggs, taken near San Antonio, which are very similar to those of the Virginian Quail (*O. virginianus*), but are slightly smaller.

I procured some peculiar varieties of this Quail near San Antonio, with the throat black, surrounded by white, instead of being pure white, so that the white forms a narrow crescent pointing upwards, the black commencing from the bill. Some had the black patch very dark and clearly defined; and others had the black extending a very short distance below the bill, and mixed with white spots. These varieties are not found by themselves, but in the same bevy with birds of the usual type.

OREORTYX PICTUS (Douglas)? Mountain-Quail?

Westfall the hunter described to me a Quail which he had shot in the hills near the head-springs of the Leona, which I feel pretty sure must have been this bird.

LOPHORTYX CALIFORNICUS (Shaw)? California Quail?

Some Californians (who were with Captain Skillman on his expedition from San Antonio to El Paso to watch the move-

ments of the troops stationed there) told me that they had shot some California Quail near Devil's River. They might, however, have been Gambel's Quail, which certainly is found there.

416 **LOPHORTYX GAMBELI** (Nuttall). Gambel's Quail.

Not a common bird in Texas, and found only in certain localities. At Muddy Creek, near Fort Clarke, they are not uncommon, and are also found near the Nueces River.

CALLIPEPLA SQUAMATA (Vigors). Blue Quail.

On the Rio Grande above Roma, and between the Rio Grande and the Rio Nueces, this Quail is abundant, and where it is found seems to have the country to itself, to the exclusion of the other species. I found them most difficult to shoot; for when a bevy was disturbed the birds would scatter themselves, and, running with outstretched necks and erected crests, would dodge through the bushes like rabbits, so as soon to be out of reach. I have seen a bevy of ten to fifteen so completely disappear that I could not find a single one of them. If left undisturbed they commence their call-note (which is not unlike the chirp of a chicken), and soon reunite. [‡]

At first I could not bring myself to fire at them on the ground, but, finding it impossible to get them to rise, I soon gave up fair play, and must plead guilty to several shots into be vies when, unmindful of danger, they were collected under a cactus or a bush. Near the small villages in Mexico I have found them very tame; and at Prosilio, on the Rio Grande, I noticed them in a corral, feeding with some poultry. I have never seen their eggs, but am told by the Mexicans that they are dull white, with minute reddish spots at the larger end.

Professor Baird, in his work on the 'Birds of North America,' speaks (page 647) of a specimen of this species from New Leon having "a large brownish chestnut spot on the middle of the belly," and thus differing from other skins. In all adult males I shot, both in Texas and Mexico, I noticed this chestnut patch, and sometimes to a slight extent in the females also.

Male. Bill blackish; legs bluish-grey; iris dark brown. Stomach containing small mezquite beans.

CYRTONYX MASSENA (Lesson). Massena Quail, or Black Partridge.

I had often heard of the "Black Partridge," and had sought for it near San Antonio, but without success. In November, when in the Bandera Hills, I kept a sharp look out for it, having been told by a Mexican herdsman that I should probably find it there, and I was at last successful in my search. One evening when returning to camp I noticed some Quail which seemed unlike Texan Quail, flying down the hillside and dropping into a bunch of high weeds. Suspecting them to be Black Partridges, I would not then disturb them, as they had evidently taken up their quarters for the night; but I was there the following morning before daybreak, and so soon as it was light enough to see to shoot I walked through the weeds and trod them up, getting a double shot at them and knocking down a couple, which to my delight I found to be the real Massena Quail. I tried to mark the rest down, but could not do so; and, for all I know to the contrary, they may be going yet, for I watched them as far as I could with my glass, and they were still on the wing. I afterwards found the bird on several occasions when riding along the higher hill-ranges, and altogether shot six, while a man who was with me killed two more. In their habits they are more like the Texan Quail than any other, but on the wing are easily distinguished, for they fly heavily though very swiftly. When disturbed, they squat very close, and will not move until one is close upon them; indeed I found them generally rise up almost under my feet. A ranchero living in the Bandera Hills promised to procure the eggs for me, as they breed near his rancho; but I was unable to go there in the spring to remind him, and of course he never sent them. He described them as being white, and larger than those of the Texan Quail. I never found this species in any other part of Texas, except Bandera county, but I was told that it is abundant in the hilly country at the head of the Leona, and is also found near Laredo.

Adult male. Upper mandible dark horn-blue, light blue at base; under mandible light blue; iris reddish-brown; legs light milk-blue.

Young male. Upper mandible dull bluish-brown, light at base; under mandible dull light blue; iris reddish-brown; legs dull light bluish.

Adult female. Upper mandible dark brownish-horn; under mandible light brown; legs light brownish-blue; iris reddish-brown.

GRUS AMERICANA (Linnæus). Whooping Crane.

On my first visit to the town lagoon at Matamoras, in June 1863, I saw a couple of this Crane, and subsequently saw a small flock of seven or eight; but they were so wary that I only succeeded in shooting two, one of which fell into the Rio Grande and was lost. I inquired of the Mexicans as to where they bred, and was told that their eggs could be procured at a lagoon some distance to the south-west of Bagdad (Boca del Rio Grande); but, partly owing to the want of leisure, and partly to the unsettled and dangerous state of the country, I was unable to go there. On my return to Matamoras in 1864 I saw none at the lagoons near there, and therefore have no specimen in my collection.

During my rambles in Texas I only saw this bird on two or three occasions near San Antonio, and once at Point Isabel; but I was told that it is occasionally seen on Galveston Island, and at the mouth of the Brazos River.

GRUS CANADENSIS (Linnæus). Sandhill-Crane.

Near Matamoras I never saw the Sandhill-Crane; but on our journey from Brownsville to San Antonio, in September 1863, we saw birds of this species every day. During the winter they were abundant near San Antonio, but disappeared towards the spring. I shot several for the pot, and found them excellent eating, indeed almost equal in that respect to Wild Turkeys. I was told that they breed near Galveston and in Matagordo Bay; and one was sent to me from Fort Stockton by Colonel M'Cormick.

GRUS FRATERCULUS, Cassin. Little Crane.

I noticed the Little Crane several times near San Antonio, and once near the Rio Nueces, and do not think it is of uncommon occurrence in Southern Texas. I have one single speci-

men, shot near San Antonio and skinned for me by Dr. Heermann. This was the only one I could procure, as the bird is very wary and difficult to approach.

DEMIEGRETTA PEALII (Bonaparte). Peale's Egret.

[Not uncommon near San Antonio and in Eastern Texas during the summer months.—A. L. H.]

DEMIEGRETTA RUF A (Boddaert). Reddish Egret.

[The same remark is applicable to this as to the preceding species.—A. L. H.]

DEMIEGRETTA LUDOVICIANA (Wilson). Louisiana Heron.

Common at Matamoras and also near San Antonio. I received one from Fort Stockton shot during the summer. At San Antonio I have shot them so late in the season that I think it not improbable that some few may remain there over the winter. In June 1864 I found numbers breeding on Galveston Island, building heavy nests on the ground or in the low bushes, and laying four light blue eggs.

GARZETTA CANDIDISSIMA (Gmelin). Snowy Heron.

In August 1863 large flocks of Snowy Herons visited the lagoons near Matamoras; indeed so numerous were they that I on one occasion killed thirteen at one discharge. Near San Antonio I noticed one or two in the spring of 1864, and found a few breeding on Galveston Island in June. One was sent me from Fort Stockton.

HERODIAS EGRETTA (Gmelin). White Heron.

I noticed a few near Matamoras in August, and during my stay at San Antonio shot three on different occasions. At Galveston I saw several in June; and I received one from Fort Stockton.

ARDEA HERODIAS, Linnæus. Great Blue Heron.

Common throughout the whole year except during the two coldest months, when I never noticed any.

FLORIDA CÆRULEA (Linnæus). Blue Heron.

Very common near Matamoras during the summer, not frequenting the lagoon, but generally found on the Rio Grande, either close under the banks or perched on some old log in the

stream. I noticed one or two near San Antonio, and also on the Brazos and Colorado Rivers.

ARDETTA EXILIS (Gmelin). Least Bittern.

In July and August I noticed two at the lagoon at Matamoras. They are occasionally seen near San Antonio.

BOTAURUS LENTIGINOSUS (Montagu). American Bittern.
Common and resident.

BUTORIDES VIRESCENS (Linnæus). Green Heron.
Common, breeding on all the larger rivers.

NYCTIARDEA GARDENI (Gmelin). American Night-Heron.
Of rather common occurrence in all the parts of Texas I visited.

NYCTHERODIUS VIOLACEUS (Linnæus). Yellow-crowned Heron.

Commoner than the last species. At Matamoras I noticed none before the end of August.

TANTALUS LOCULATOR, Linnæus. Wood-Ibis.

Not of uncommon occurrence near San Antonio; and I am told by planters living on the Brazos and Colorado Rivers that it breeds there.

IBIS RUBRA (Linnæus). Scarlet Ibis.

I have been assured by friends living at Matamoras that the Scarlet Ibis is found there and at a lagoon near Brownsville during the winter. I remained at San Antonio at that season, and thus had no opportunity of judging for myself; but the Scarlet Ibis is a bird that is not easily confounded with any other, and I therefore include it in this list.

IBIS ALBA (Linnæus). White Ibis.

Abundant at Matamoras in August, frequenting the town lagoon, where I have on several occasions shot four or five before breakfast. I always ate them, and found them excellent—indeed, far superior to the Curlew.

IBIS ORDI (Bonaparte). North-American Glossy Ibis.

This Ibis was very numerous at the lagoons near Matamoras

in the month of August, appearing somewhat earlier than the White Ibis.

I prepared some choice specimens of both these birds, which, however, were destroyed during my absence in Texas ; and one was sent to me from Fort Stockton in a collection formed by Mr. P. Duffy.

PLATALEA AJAJA, Linnæus. Roseate Spoonbill.

Abundant near Matamoras during the summer, and I never visited the lagoon without seeing several. On our journey to San Antonio in September we saw several at different places near the coast ; and in June 1864 I saw two or three on Galveston Island, where it is known under the name of "Flamingo." I was told that it had bred on the island in former years, but it does not do so now, being too much disturbed. I received one in the collection from Fort Stockton, where it was obtained on the 3rd of August.

CHARADRIUS VIRGINICUS, Borkhausen. American Golden Plover.

Not uncommon near San Antonio in the autumn ; but I saw none in the spring.

ÆGIALITES VOCIFERUS (Linnæus). Killdeer Plover.

Common, not only on the sea-coast, but also inland at almost every pool. I have been often startled when watering my horse at some deserted-looking pool in a half-dried-up river-bed by the Killdeer's cry close to me ; for they will often squat until one is close upon them, and then run or fly off uttering their loud cry. They breed on the coast, and also inland, as I had eggs from Systerdale, taken late in May. When on Galveston Island on the 26th of May, a German, who was with me, found a young Killdeer in a depression in the ground made by a horse's hoof ; we did not, however, disturb it, as the old bird came flying round exhibiting the greatest anxiety on its behalf

Male. Bill blackish ; legs greenish-grey ; iris dark brown.

ÆGIALITES MONTANUS (Townsend). Mountain-Plover.

In December 1863, when riding about the open prairie-country near San Antonio, I noticed a few Mountain-Plovers, finding them generally near the highroads. In their habits they re-

minded me of the European Ring-Plover (*Æ. hiaticula*), running very swiftly, with the head drawn in close to the body. As the winter advanced they became more plentiful, but disappeared in the early spring, none showing themselves later than the commencement of April. They feed on cattle-ticks and beetles of all sorts; and seem to prefer the barren sand-plains to the grassy parts in the neighbourhood of water.

Beak black; legs greenish-grey; iris black.

ÆGIALITES WILSONIUS (Ord). Wilson's Plover.

Common about the coast, so far as my own experience goes, during the summer season. On Galveston Island I noticed many during my stay there in May and June, and shot two or three, but could not succeed in finding any eggs.

ÆGIALITES SEMIPALMATUS, Bonaparte. Semipalmated Plover.

Pretty common about the pond-holes near San Antonio in the autumn and spring, but I noticed none near Matamoras when there.

SQUATAROLA HELVETICA (Linnæus). Grey Plover.

On the 6th of September, 1863, at the salt-ponds in the sandy desert between the Sal Colorado and King's Rancho, I shot one specimen (which was well marked with black), and killed another on Galveston Island on the 26th of May, 1864; but I skinned neither of them.

HÆMATOPUS PALLIATUS, Temminck. American Oystercatcher.

When out boating in Galveston Bay in June I saw a couple of Oystercatchers, and pointed them out to the boatman, who called them "Pillwilletts," but said that he knew the difference between them and the real Willet (*Symphemia semipalmata*). He also said that the Oystercatcher is not a common bird, but that one or two pair bred sometimes on the outer islands in West Bay.

STREPSILAS INTERPRES (Linnæus). Turnstone.

I found several birds of this species quite close to the town of Galveston on the 26th of May, 1864; and on the beach to the westward there was a good number of them. On my second

visit to Galveston, in June, I saw a few, but not so many as on the above-mentioned occasion.

RECURVIROSTRA AMERICANA, Gmelin. American Avocet.

Early in July I often saw Avocets at the town-lagoon at Matamoras, generally finding them in families of five or six, some of the young birds being only just able to fly. They were not shy, but would come to a shallow part of the lagoon close to the houses and wade along, moving their heads from side to side with perfect regularity, reminding one forcibly of a party of mowers, as they do not go in an even line, but, like mowers, one slightly behind and to the side of the other. Towards August they became much more abundant, and I rarely went to the lagoon without observing a dozen or fifteen. In May and June 1864 I saw several pair on Galveston Island, but found no nest. I was, however, told by the fishermen that both the Avocet and Stilt breed on Bolivar Point, and on the islands outside the Brazos and St. Louis Pass. I also received a specimen from Fort Stockton.

HIMANTOPUS NIGRICOLLIS, Vieillot. Black-necked Stilt.

Early in July I occasionally saw one or two Stilts near Matamoras, but did not notice many before the commencement or middle of August, when I never went to the lagoon without finding one or two flocks. They are very shy, and when disturbed fly round with loud cries, scaring everything else away. I generally shot them by hiding in the bushes near the lagoon and getting some one to walk round and frighten them off; I could then be almost certain of a shot as they passed overhead, for they always flew off towards the river. On the 2nd of June, 1864, I saw two pair on Galveston Island; and on the 4th of July, after a heavy fall of rain, they were to be found all over the flooded lands near San Antonio.

PHALAROPUS WILSONI, Sabine. Wilson's Phalarope.

In September, when travelling from Brownsville towards San Antonio, I saw on the pond at Barton's Rancho a Phalarope which, I believe, was of this species, but I was unable to shoot it. On the 4th of July, 1864, I noticed a pair on some flooded

lands near San Antonio, both of which I succeeded in shooting.

Bill and legs dark olive-brown ; iris dark brown.

GALLINAGO WILSONI (Temminck). Wilson's Snipe.

I found Snipe very common near San Antonio during the winter, and had some capital sport, the more so as, nearly every one being absent with the army, I had the shooting almost to myself. I shot the last one on the 20th of April, not having seen any during the previous week.

MACRORHAMPHUS GRISEUS (Gmelin). Brown Snipe.

On the 29th of June, 1863, I first noticed a few birds of this species at the lagoon near Matamoras ; and from that time onwards they continued to arrive, some migrating further south, but a considerable number remained in that neighbourhood. I shot them both in the red and grey plumage ; and so numerous were they in July and August that I shot twenty-five one morning before breakfast. They go in flocks of from ten to thirty, and struck me as being more of the Sandpiper than the Snipe in their habits, as I invariably found them on the shores of the lagoons, often in company with Sandpipers, and never in the same localities as *Gallinago wilsoni*. I generally found the Stilt-Sandpiper (*Micropalama himantopus*) in company with this species at the Matamoras lagoon.

I only observed the Brown Snipe on one occasion near San Antonio ; and that was after a heavy fall of rain, in July 1864, when I saw several at a pond.

Bill blackish-brown ; legs light greenish-brown ; iris dark brown.

TRINGA MACULATA, Vieillot. Pectoral Sandpiper.

A few Pectoral Sandpipers appeared near Matamoras in July 1863, not frequenting the lagoons, but oftener found on the banks of the Rio Grande or at small pools after rain. In April 1864 I observed several small flocks of four or five at the water-holes near San Antonio, and in May shot three at Howard's Rancho on the Medina River.

Male (2nd May, 1864). Bill greenish-black, olive-green at base ; legs clay-yellow ; iris dark brown ; testes much developed.

TRINGA WILSONI, Nuttall. Least Sandpiper.

Very common at Matamoras in the autumn, arriving there late in July. In the early spring also I shot several near San Antonio.

Bill brownish-black; legs light yellowish-brown; iris dark brown.

EREUNETES PETRIFICATUS, Illiger. Semipalmated Sandpiper.

Not uncommon near Matamoras, but by no means so numerous as the last-named species. I never saw any at San Antonio.

Bill black; legs dark olive-brown; iris dark. Stomach containing small worms.

MICROPALAMA HIMANTOPUS (Bonaparte). Stilt-Sandpiper.

When out shooting at the lagoon, soon after my arrival at Matamoras, I shot a Sandpiper that was quite new to me; and having no work on ornithology to which I could refer, I noted down a careful description in my pocket-book. Subsequently, on comparing it with Mr. Cassin's account in Baird's 'Birds of North America' (which book I procured at San Antonio), I found it to be the species named above. During my stay at Matamoras I shot several more Stilt-Sandpipers, meeting with them far oftener (as the different kinds of birds of this family began to arrive from the north), and generally finding them in company with *Macrorhamphus griseus*. I skinned several, all of which, on my return to Matamoras in 1864, I found so damaged that I had to throw them away. When out Snipe-shooting on the 20th November, 1863, near San Antonio, I shot one of these birds, and saw another, which, however, I did not succeed in killing. The one I shot I preserved and now have, having compared it with the miserable remains of those I had left at Matamoras before I threw them away.

Bill dark greenish-black; legs dark greyish; iris dark brown.

SYMPHEMIA SEMIPALMATA (Gmelin). Willet.

Not uncommon near San Antonio during the summer. I shot specimens at the Boca Grande in July and August, and between Matamoras and Victoria (at King's Rancho) in September, but never saw any near San Antonio. I saw several in June on Galveston Island, but shot none. One was sent to me from Fort Stockton.

GAMBETTA MELANOLEUCA (Gmelin). Telltale.

Common near San Antonio during the winter season, until the month of April, after which I saw none, but found several on Galveston Island in June.

GAMBETTA FLAVIPES (Gmelin). Yellowshank.

At Matamoras the Yellowshanks were not common, and I only shot one during the two months I was there. In the spring of 1864 (at San Antonio) I noticed them oftener than I did at Matamoras, and shot several during April and early in May. Early in June I saw several on Galveston Island.

RHYACOPHILUS SOLITARIUS (Wilson). Solitary Sandpiper.

About the middle of August I noticed two Solitary Sandpipers on a sandbank in the Rio Grande near Matamoras, and succeeded in shooting one, this being the only time I saw any in that neighbourhood. During the month of April 1864 I often found them at the small pools and on the banks of the small streams near San Antonio, and shot several.

Male. Bill brownish-black; lower mandible dark green at the base; legs dull green; iris dark brown.

TRINGOIDES MACULARIUS (Linn.). Spotted Sandpiper.

I shot one specimen in immature plumage near Matamoras in August 1863, and found the species abundant near San Antonio in September and October.

ACTITURUS BARTRAMIUS (Wilson). Bartram's Sandpiper, or Grass-Plover.

On our journey from Brownsville to San Antonio in September 1863 we found, on quitting the sandy regions and entering into the grass-country, the Grass-Plovers very abundant. They do not go in flocks, but are scattered singly all over the country. In their habits they are shy and most difficult to approach, if one is on foot; but by riding or driving near them, I found I could always get within shot before they took to flight. When undisturbed they run about very swiftly, catching insects amongst the grass, and they often reminded me of our Stone-Curlew (*Œdicnemus crepitans*). When disturbed they will squat close for a time, and then, if one walks towards them, they will rise suddenly and fly off uttering a clear whistle.

In New Orleans, where this bird is known under the name of "Papabot," it is much sought after by epicures ; and I for one quite agree with them in so doing, for I never tasted a better bird. Indeed we ate them three times a day, whenever we could procure them, and would touch nothing else. Our mode of cooking them was to pluck and draw them, then split them up the back and fry them in their own fat, adding a little pepper and salt ; and in such good condition were they, that the melted fat would almost cover them in the pan, and the process nearly became one of boiling instead of frying. In some cases I have seen them so fat that they actually burst on falling to the ground.

During the winter I observed none ; but in April and May 1864 I noticed a few near San Antonio ; they were, however, so shy that I only shot one.

Upper mandible dark greenish-black ; lower mandible yellow ; legs pale ochre ; iris brown. Stomach containing snails.

TRYNGITES RUFESCENS (Vieillot). Buff-breasted Sandpiper.

Late in August, on visiting the lagoon near Matamoras early one morning, I found a small flock of Sandpipers near to me, on a little grassy place a short distance from the water, and, on shooting several, found them to be Buffbreasts. On visiting the same place the following day I found more there, and altogether shot about a dozen, most of which I skinned.

On our way towards San Antonio in September we found these birds pretty common throughout the whole journey, and I often shot them for the pot, finding them excellent eating.

They are not shy, and generally go in flocks of from five to twelve, not resorting to the pools, but living on the small insects found amongst the coarse herbage which often grows some distance from water. Near Victoria they were very abundant ; but after leaving that town I only saw a few. At San Antonio I saw none ; but Dr. Heermann told me that they are often found there in the spring and autumn.

Male. Bill greenish-black ; legs clay-yellow ; iris dark hazel. Stomach containing small insects.

LIMOSA FEDOA (Linn.). Marbled Godwit.

In June I noticed a few Godwits near Brownsville and Mata-

moras, but only shot one. In August they became more numerous, and about the time I left I saw them daily at the lagoon.

NUMENIUS LONGIROSTRIS, Wilson. Long-billed Curlew.

Not uncommon near Matamoras late in July and early in August. In September we found them very abundant between Brownsville and Victoria, and more particularly so on the sand-plains and at the saltwater ponds near Barton's Rancho, at which latter place I killed five at one shot.

During my visit to Galveston Island in May and June 1864 I saw many there, and was told by several gunners that a few breed at the lake in the middle of the island. At San Antonio I saw and shot them during the winter months; and three specimens were included in the collection from Fort Stockton.

Bill dark brown; legs greenish-grey; iris brown.

NUMENIUS HUDSONICUS, Latham. Hudsonian Curlew.

Found occasionally in the autumn and spring. I have two specimens shot near San Antonio.

NUMENIUS BOREALIS (Forster). Esquimaux Curlew.

Found near San Antonio in the spring. It is commoner than the preceding species, but not so common as *Numenius longirostris*.

RALLUS ELEGANS, Audubon. Marsh-hen.

Pretty common on the Brazos and Colorado Rivers, and also found occasionally on Galveston Island.

RALLUS VIRGINIANUS, Linnæus. Virginia Rail.

[Shot near San Antonio on several occasions.—A. L. H.]

I shot a couple of these Rails at Matamoras in August 1863.

PORZANA CAROLINA (Linnæus). Carolina Rail.

Not uncommon near San Antonio in October and December.

PORZANA NOVEBORACENSIS (Gmelin). Yellow Rail.

[Not uncommon at Mitchell's Lake, near San Antonio.—A. L. H.]

When I visited this locality it was nearly dried up, and I found no Yellow Rails there; but all the gunners who resort thither assure me that in some seasons they are very numerous.

FULICA AMERICANA, Gmelin. American Coot.

Very numerous near Matamoras and Brownsville during the

time I was there. Near San Antonio also I shot several late in the autumn of 1863.

GALLINULA MARTINICA (Linnæus). Martinico Gallinule.

Dr. Heermann had the skin of one, shot near San Antonio. It is said to be rather common than otherwise on the Brazos and Colorado Rivers.

The following notes on the *Natatores* will, I fear, be found very meagre; but I had so little chance of observing the birds belonging to this Order, that I must offer that as my excuse. I spent my winter far in the interior; and even during the summer my visits to the coast were few and far between, consisting only of two trips from Matamoras to the Boca del Rio Grande in July and August 1863, and of two visits to Galveston Island in May and June 1864, spending altogether a week at the latter place.

I would gladly have passed a portion of the winter at Matamoras; for, if half the tales about the vast quantities of sea-fowl found during the winter at the Boca Grande are true, it must be difficult to find a more suitable place to collect wild-fowl; but I was compelled to remain inland during the whole winter. However, as it was, I took every opportunity of examining the waterfowl that were brought into San Antonio during the winter, and spent what time I could spare in shooting at Mitchell's Pond—a small lake not far from San Antonio, and a great place of resort for waterfowl during the winter.

CYGNUS, sp. ?

Swans are not uncommon near Brownsville during the winter; and a friend who remained there during the winter shot one, and gave me the skin of its breast, thinking I wanted it for the sake of the down. I am, of course, unable to say whether the species was *C. americanus* or *C. buccinator*.

?ANSER HYPERBOREUS, Pallas. Snow-Goose.

In November I saw several large flocks of what I believe to have been this species at Mitchell's Pond. It is said to be very common during the winter on the coast.

ANSER GAMBELI, Hartlaub. American White-fronted Goose.
I shot several at Mitchell's Pond during the winter.

BERNICLA CANADENSIS (Linnæus). Canada Goose.

Common near San Antonio during the winter. The shore gunners are well aware of the difference between this and *Bernicla hutchinsi*, calling the former the "Bay-Goose," and the latter the "Prairie-Goose." I have seen great numbers of Geese on the prairies when travelling, and on one occasion they showed so little fear, or were so wearied, that I rode near enough to shoot one with my pistol before they flew.

BERNICLA HUTCHINSI (Richardson). Hutchins's Goose.

Common both on the coast and inland.

I shot several at Mitchell's Pond during the winter.

BERNICLA BRENTA, Stephens. Brent-Goose.

Common on the coast during the winter.

DENDROCYGNA AUTUMNALIS (Linnæus). Long-legged Duck.

Found occasionally near Matamoras during the summer, and breeds not far from Monterey (as I am assured by a man living at that place who knows the bird well). At Galveston a German gunner told me that this bird is common during the winter, arriving in November and departing in March.

DENDROCYGNA FULVA (Gmelin). Rufous Long-legged Duck.

Observed occasionally near Brownsville. In June I found it in abundance on Galveston Island. A German, whom I saw carrying one, told me that birds of this species were found there, and first took me to their chief place of resort, a lake in the middle of the island. He told me also that they breed there, but very late in the season, not having even then (1st June) commenced.

Male. Bill bluish-black ; legs very dark lead-blue ; iris dark.

ANAS BOSCHAS, Linnæus. Mallard.

Abundant during the winter, frequenting the inland streams and ponds.

ANAS OBSCURA, Gmelin. Dusky Duck.

I have one specimen, shot by Dr. Heermann near San Antonio in the month of December.

DAFILA ACUTA (Linnæus). Pintail.

Common during the winter.

NETTION CAROLINENSIS (Gmelin). Green-winged Teal.

Not common during the winter.

QUERQUEDULA DISCORS (Linnæus). Blue-winged Teal.

Common throughout the country.

[Breeds here on the Attascosa, as I have observed it in June.

—A. L. H.]

CHAULELASMUS STREPERUS (Linnæus). Gadwall.

Not uncommon near Eagle Pass during the winter, and on the ponds and streams between that place and San Antonio.

On the 2nd June I shot one on Galveston Island.

MARECA AMERICANA (Gmelin). American Wigeon.

Common near the coast throughout the winter.

AIX SPONSA (Linnæus). Summer-Duck.

Not uncommon near San Antonio during the summer. I shot a fine male on the San Pedro, 23rd April, 1864; and a female, killed on the 19th October, was sent to me from Fort Stockton.

FULIX MARILA (Linnæus). Scaup-Duck.

Common throughout the winter.

FULIX AFFINIS (Eyton). American Scaup-Duck.

[Found on the coast during the winter.—A. L. H.]

FULIX COLLARIS (Donovan). Ring-necked Duck.

On a journey from San Antonio to Eagle Pass in December I shot one on the Nueces River, seeing several more at the same time.

ÆTHYIA AMERICANA (Eyton). American Pochard.

Not uncommon during the winter.

ÆTHYIA VALLISNERIA (Wilson). Canvasback.

I shot two on the Nueces River in December, and saw several at Turkey Creek.

BUCEPHALA ALBEOLA (Linnæus). Buffle-headed Duck.

I have been told that this Duck is found at the Boca del Rio

Grande during the winter. I had the skin of a male bird sent to me that had been shot at Fort Stockton.

MERGUS AMERICANUS, Cassin. American Goosander.

Found occasionally during the winter. The collection I have mentioned from Fort Stockton included a male and two females of this species.

LOPHODYTES CUCULLATUS (Linnæus). Hooded Merganser.

Found on the Leona, Medina, and Nueces Rivers, and probably on most of the larger streams also, but nowhere common.

CHROICOCEPHALUS ATRICILLA (Linnæus). Laughing Gull.

Abundant on the sea-coast during the summer. I saw great numbers off Bagdad from June to August; and when at Galveston in June 1864 I found them breeding there abundantly, making a very slight nest of straws and drift-stuff, in which they lay four eggs. The nest is generally placed on the ground or on a tussock of grass.

STERNA ARANEA, Wilson. Gull-billed Tern.

Not uncommon near Matamoras in July and August. On June 2, 1864, I found it breeding on Galveston Island, the eggs being then incubated. The nest is generally merely a hole scratched in the sand, but in some instances an attempt had been made to form a bed of straws and drift-stuff. The eggs are generally three, but sometimes four in number.

STERNA REGIA, Gambel. Royal Tern.

Common at the Boca del Rio Grande during the summer.

STERNA FULIGINOSA, Gmelin. Sooty Tern.

I saw two at Galveston in June, but found no nest there.

STERNA WILSONI, Bonaparte. Wilson's Tern.

I procured one specimen at San Antonio in May 1864, and in June found numbers breeding in Galveston Bay, the eggs being either near hatching or else hatched-out. The nest is made in the high piles of drift-stuff; and the eggs, three or four in number, much resemble those of *Sterna fluviatilis*, as might be expected.

STERNA FRENATA, Gambel. American Lesser Tern.

Common on the coast during the summer. I often saw them

at the lagoon near Matamoras, and they were abundant at the Boca Grande. In June 1864 I found them breeding in West Galveston Bay on the small shell-bars or sand-islets, and not on the main island. The nests were merely slight depressions in the sand; but I only found three, each containing one or two eggs, which were quite fresh; I was also told by the man I had with me that they breed very late.

HYDROCHELIDON PLUMBEA, Wilson. American Black Tern.

Common at the Boca Grande during the summer, but I did not observe it at Galveston. At the town-lagoon at Matamoras I have often seen twenty or thirty of these birds at one time. One was sent to me from Fort Stockton.

RHYNCHOPS NIGRA, Linnæus. Black Skimmer.

In June and July 1863 I often saw six or seven of these birds at the Matamoras lagoon, and found them abundant at the Boca Grande. In June 1864 they were common at Galveston, but I found no eggs; indeed I was told that it was too early in the season.

PELECANUS ERYTHORHYNCHUS, Gmelin. Rough-billed Pelican.

[Not uncommon on the coast during the autumn and winter. —A. L. H.]

PELECANUS FUSCUS, Linnæus. Brown Pelican.

Common at the Boca Grande in June, July, and August, and abundant at Galveston in June; but as they had then finished breeding, I consequently procured no eggs.

TACHYPETES AQUILUS (Linnæus). Frigate-bird.

I shot one off the Rio Grande in June 1863.

GRACULUS MEXICANUS, Bonaparte. Mexican Cormorant.

Common near Matamoras during the summer. I saw several Cormorants at Galveston, but did not succeed in shooting one. I received, however, two specimens from Fort Stockton.

PLOTUS ANHINGA, Linnæus. Darter or Snake-bird.

Common on all the large rivers in Texas. I shot one on the Medina on the 5th May, and one was sent to me from Fort Stockton.

COLYMBUS TORQUATUS, Brünnich. Great Northern Diver.

A specimen of this Diver, in immature plumage, was sent to me, marked as having been obtained at Fort Stockton, 6th November.

PODICEPS CALIFORNICUS (Heermann). California Grebe.

I shot one specimen at Mitchell's Lake, in December 1863.

PODILYMBUS PODICEPS (Linnæus). Pied-bill Grebe.

Not uncommon near San Antonio in the winter. I observed several on a pond near Matamoras in August 1864, and shot two, one of which I now have in my collection. Another (a young bird) was also sent to me by Colonel M'Cormick, in the collection made by Mr. P. Duffy at Fort Stockton.

III.—*Field Notes on Lophortyx gambeli.* 28 miles
By ELLIOTT COUES, M.D.

To study the habits of Gambel's Quail we must leave far behind us all the luxuries and comforts of civilized life. A thousand miles beyond the advance-wave of the western tide of civilization we must go, and stop just before meeting the receding under-tow that is now setting back from the Pacific coast of North America towards the Rocky Mountains. Between the two points there is a wild region over which the savage Apache Indian is still master, where the white man only retains his hold by daily-renewed hand-to-hand conflicts. It is a region of which it may be truly said that there is "the very grandeur of desolation." The face of nature is torn, as by Titanic violence, into yawning chasms, rocky cañons, and dry, tortuous arroyos, upheaved into stately mountains and grotesquely-shaped picachos and precipice-bounded mesas, covered for hundreds of miles with black lava vomited ages ago from extinct and now unrecognizable volcanos. Rivers there are in whose dry sandy beds the traveller may perish from thirst—and vast plains, too, covered with dry crisp grass and sage-brush (*Artemisia*) and grease-wood (*Larrea mexicana*), yet almost deserts from this same dearth of water. But it is a country of anomalies and contrasts as well as of wonders. Embosomed in the wildest of mountains are lovely valleys, moist, green, and fertile. Vast forests of noble pines and firs, and immense tracts